Amendments to the Claims:

Please cancel Claims 6 and 23–33, and amend Claims 1, 5, 7–14 and 16–22 as indicated in the following listing of claims, which replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A cryotherapy system comprising:

a plurality of cryoprobes, each such cryoprobe having a shaft with a closed distal end adapted for insertion into a body and conduits for flowing a cryogenic fluid through the shaft to reduce a temperature of the distal end;

a source of the cryogenic fluid;

a plurality of flow-control metering valves in fluid communication with the conduits of the plurality of cryoprobes and with the source of the cryogenic fluid;

a compressor in fluid communication with the conduits of the plurality of cryoprobes to define a self-contained fluid system; and

a computer processor ~~adapted to~~ comprising:

instructions to control the plurality of flow-control metering valves and the compressor to provide desired flows of the cryogenic fluid through the conduits of the self-contained fluid system; and

instructions to control the compressor and the plurality of flow-control metering valves to provide an initial flow of the cryogenic fluid through the conduits of the cryoprobes under physical conditions near a critical point of a liquid-vapor system for the cryogenic fluid, wherein the critical point defines a point in a phase diagram of the liquid-vapor system where molar volumes are substantially equivalent for liquid and gas,

whereby vapor lock associated with freezing of the cryoprobes is avoided.

2. (Original) The cryotherapy system recited in claim 1 wherein the self-contained fluid system is an open-loop system.

3. (Original) The cryotherapy system recited in claim 1 wherein the self-contained fluid system is a closed-loop system.

4. (Original) The cryotherapy system recited in claim 1 wherein:

the cryogenic fluid is a gas; and

each such cryoprobe further has a heat exchanger disposed within the shaft in thermal communication with the conduits of such cryoprobe.

5. (Currently Amended) The cryotherapy system recited in claim 4 wherein:

each of the plurality of cryoprobes includes a Joule-Thomson port disposed in the distal end of the shaft in thermal communication with the heat exchanger; and

the computer processor ~~is~~ further ~~adapted~~ comprises instructions to control operation of each of the Joule-Thomson ports.

6. (Canceled)

7. (Currently Amended) The cryotherapy system recited in claim **[[6]]** 1 wherein the computer processor ~~is~~ further ~~adapted~~ comprises instructions subsequently to reduce a pressure of the ~~liquid~~ fluid in the cryoprobes, whereby colder ~~liquid~~ fluid temperatures may be maintained without vapor lock after the initial flow is established.

8. (Currently Amended) The cryotherapy system recited in claim **[[6]]** 1 wherein the compressor comprises a submersible pump for compressing ambient cryogenic ~~liquids~~ fluids.

9. (Currently Amended) The cryotherapy system recited in claim 8 wherein the compressor comprises a heat exchanger to remove heat of compression through heat exchange of the compressed cryogenic ~~liquid~~ fluid with the ambient cryogenic ~~liquids~~ fluids.

10. (Currently Amended) The cryotherapy system recited in claim 8 wherein:

the plurality of cryoprobes are in fluid communication with the submersible pump through respective supply lines; and

the computer processor ~~is~~ further ~~adapted~~ comprises instructions to set a freeze power of the plurality of cryoprobes by regulating flow through the respective supply lines.

11. (Currently Amended) The cryotherapy system recited in claim **[[6]]** 1 wherein the compressor comprises a push-pull bellow system and a linear actuator motor.

12. (Currently Amended) The cryotherapy system recited in claim 11 wherein the computer processor ~~is~~ further ~~adapted~~ comprises instructions to control a force exerted by the linear actuator motor to set a pressure of the cryogenic ~~liquid~~ fluid.

13. (Currently Amended) The cryotherapy system recited in claim **[[6]]** 1 further comprising a source of warmed gas in fluid communication with the flow-control metering valves, wherein the computer processor ~~is~~ further ~~adapted~~ comprises instructions to control the flow-control metering valves to initiate flow of the warmed gas through the conduits as part of an active thaw procedure.

14. (Currently Amended) The cryotherapy system recited in claim 1 wherein the computer processor ~~is~~ further ~~adapted~~ comprises instructions to determine the desired flows from predefined imaging parameters.

15. (Original) The cryotherapy system recited in claim 1 wherein the predefined imaging parameters correspond to a definition of freeze margins in the body.

16. (Currently Amended) The cryotherapy system recited in claim 1 wherein:

each of the plurality of cryoprobes further has a plurality of multifunction electrical wires; and

the computer processor ~~is adapted~~ comprises instructions to monitor the operation of the multifunction electrical wires.

17. (Currently Amended) The cryotherapy system recited in claim 16 wherein the computer processor ~~is adapted~~ comprises instructions to monitor operation of the multifunction electrical wires to monitor a temperature.

18. (Currently Amended) The cryotherapy system recited in claim 16 wherein the computer processor ~~is adapted~~ comprises instructions to monitor operation of the multifunction electrical wires to provide heat.

19. (Currently Amended) The cryotherapy system recited in claim 16 wherein:

the body is a living body; and

the computer processor ~~is adapted~~ comprises instructions to monitor the operation of the multifunction electrical wires to stimulate a nerve within the living body.

20. (Currently Amended) The cryotherapy system recited in claim 16 wherein the computer processor ~~is adapted~~ comprises instructions to monitor the operation of the multifunction electrical wires to permit spatial localization of the cryoprobes.

21. (Currently Amended) The cryotherapy system recited in claim 1 wherein:

the ends of the cryoprobes comprise an electrically insulating material; and

the computer processor ~~is~~ further ~~adapted~~ comprises instructions to force current between the ends of the cryoprobes to heat intervening portions of the body.

22. (Currently Amended) The cryotherapy system recited in claim 1 wherein the computer processor ~~is~~ further ~~adapted~~ comprises instructions to initiate injection of a cryosensitizing substance into the body.

23–33. (Canceled)